

REMARKS

Claims 1-17 are pending in the instant application. Claims 1-17 are rejected. Claims 1 and 14 are amended herein. Claims 5 and 16 are canceled herein. No new matter has been added as a result of the amendments.

102 Rejection

Claims 1-4, 8-9, 11, 14-15 and 17 are rejected under 35 U.S.C. § 102(e) as being anticipated by Feng et al. (U.S. Patent No. 6,339,815). The Applicant has reviewed the cited reference and respectfully submits that the embodiments of the present invention that are set forth in Claims 1-4, 8-9, 11, 14-15 and 17 are neither anticipated nor rendered obvious by Feng et al.

The Examiner is respectfully directed to independent Claim 1 which sets forth an embodiment of the present invention that includes a method of accessing a block of memory that comprises:

... in response to an access request to the block of memory
ascertaining a security rule associated with the block of
memory; applying the security rule according to a security
algorithm to determine if the access request is authorized
and denying the access request in the event the access request
is unauthorized, wherein the security rule comprises one of a
plurality of security levels assigned to the block of memory
the security levels corresponding to ability of the processor
to read or write to the block of memory.

Independent Claims 9 and 14 recite limitations similar to those found in Claim 1. Claims 2-4 and 8 depend from Claim 1, Claim 11 depends from Claim 9, and Claims 15 and 17 depend from Claim 14 and recite additional limitations of the claimed embodiments of the invention.

Feng et al. does not teach a method of accessing a block of memory that includes a security rule where the “security rule comprises one of a plurality of security levels assigned to the block of memory, the security levels corresponding to ability of the processor to read or write to the block of memory” as claimed in Claim 1. In order to meet the limitations of Claim 1 a reference must disclose or suggest, either expressly or inherently, along with all the other limitations of the claim: (1) a security rule that is comprised of a plurality of security levels; (2) where the security levels are assigned to a respective block of memory; and (3) the security levels correspond to the ability of the processor to read or write to the block of memory.

Feng et al. only shows a microcontroller system that includes allocation circuitry that provides the capability to selectively allocate and/or hide portions of a program memory address space. However, Feng et al. does not disclose that respective blocks of the program memory space are allocated and hidden in accordance with a rule that includes more than one (e.g., a plurality) security level. Moreover, Feng et al. is merely concerned with selectively hiding portions of program memory space and does not associate multiple levels of security to the memory space that is hidden. In fact, nowhere in the Feng et al. reference is it taught or suggested that a “security rule comprises one of a plurality of security levels assigned to the block of memory, the security levels corresponding to ability of the processor to read or write to the block of memory” as claimed. Consequently, Feng et al. does not anticipate or render obvious the embodiments of Applicant’s invention as are set forth in Claims 1 (Claims 9 and 14 contain similar limitations).

The Examiner is reminded that in order to anticipate a Claim, the reference must teach each and every element of the Claim. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed Cir. 1987). It is clear from the discussion above that “each and every element” is in fact not described by the Feng et al. reference. Feng et al. does not “either expressly or inherently” show or suggest a security rule wherein the “security rule comprises one of a plurality of security levels assigned to the block of memory, the security levels corresponding to ability of the processor to read or write to the block of memory” as is recited in Claim 1 (Claims 9 and 14 contain similar limitations).

Therefore, Applicant respectfully submit that Feng et al. does not anticipate or render obvious the embodiments of the present claimed invention as are recited in Claims 1, 9, and 14 and, as such, Claims 1, 9, and 14 overcome the basis for rejection under 35 U.S.C. § 102(e). Accordingly, Applicant respectfully submits that Claims 1, 9, and 14 are in condition for allowance. In addition, Applicant respectfully submits that Feng et al. does not anticipate or render obvious the present invention as is recited in Claims 2-4, and 8 which depend from independent Claim 1, Claim 11 which depends from independent Claim 9, and Claims 15 and 17 which depend from independent Claim 14 that Claims 2-4, 8, 11, 15 and 17 are also in condition for allowance as being dependent on an allowable base claim.

103 Rejections

Claims 5-7, 10, 12-13 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Feng et al. (U.S. Patent No. 6,339,815) in view of Moughanni et al. (U.S. Patent No. 6,003,133). The Applicant has reviewed the cited references and respectfully submits that the embodiments of the present invention as are set forth in Claims 5-7, 10, 12-13 and 16 are neither shown nor suggested by Feng et al. in view Moughanni et al.

The Examiner is respectfully directed to independent Claim 1 which sets forth a method of accessing a block of memory that comprises:

... in response to an access request to the block of memory
ascertaining a security rule associated with the block of
memory; applying the security rule according to a security
algorithm to determine if the access request is authorized
and denying the access request in the event the access is
unauthorized, wherein the security rule comprises one of a
plurality of security levels assigned to the block of memory
the security levels corresponding to ability of the processor
to read or write to the block of memory.

Independent Claims 9 and 14 recite limitations similar to those of Claim 1. Claims 5-7 depend from Claim 1, Claims 10, 12 and 13 depend from Claim 9, and Claim 16 depends from Claim 14 and recite additional limitations of the claimed embodiments of the invention.

Feng et al. does not teach a method of accessing a block of memory that includes a security rule where the “security rule comprises one of a plurality of security levels assigned to the block of memory, the security levels corresponding to ability of the processor to read or write to the block of memory” as claimed in Claim 1. In order to meet the limitations of Claim 1 a reference must

disclose or suggest, either expressly or inherently, along with all the other limitations of the claim: (1) a security rule that is comprised of a plurality of security levels; (2) where the security levels are assigned to a respective block of memory; and (3) the security levels correspond to the ability of the processor to read or write to the block of memory.

Feng et al. only shows a microcontroller system that includes allocation circuitry that provides the capability to selectively allocate and/or hide portions of a program memory address space. However, Feng et al. does not disclose that respective blocks of the program memory space are allocated and hidden in accordance with a rule that includes more than one (e.g., a plurality) security level. Moreover, Feng et al. is merely concerned with selectively allocating and hiding portions of program memory space and does not associate multiple levels of security to the memory space that is allocated or hidden. In fact, nowhere in the Feng et al. reference is the use of a security rule taught or suggested where the “security rule comprises one of a plurality of security levels assigned to the block of memory, the security levels corresponding to ability of the processor to read or write to the block of memory” as is set forth in Claim 1 (Claims 9 and 14 contain similar limitations). Consequently, Feng et al. does not anticipate or render obvious the embodiments of Applicant’s invention as are set forth in Claims 1, 9 and 14 .

Moughanni et al. does not teach a security rule that is associated with a block of memory that is applied to determine if a request for access is authorized wherein the “security rule comprises one of a plurality of security levels assigned to the block of memory, the security levels

corresponding to ability of the processor to read or write to the block of memory” as is recited in Claim 1 (Claims 9 and 14 contain similar limitations). Moughanni et al. discloses a data processor with a privileged state firewall. In the Moughanni et al. system the disclosed processor has respective privilege modes. The disposition of requests (instructions) is based upon changes in mode between the processor’s respective privilege modes. These mode changes are tracked and enforced by a firewall system. As such, in the Moughanni et al. system, the disposition of requests is based on privilege modes associated with the processor (the privilege mode is tied to the processor and not to memory) and is not in any way based on a rule that includes multiple security levels that are associated with a particular block of memory as claimed. Therefore, even if it were possible to combine Feng et al. and Moughanni et al. as suggested in the Office Action the combination would not produce the embodiments of the invention as are set forth in Applicant’s Claims 1, 9 and 14.

In order to establish a prima facie case for obviousness within the meaning of 35 U.S.C. 103(a), “the prior art reference (or references when combined) must teach or suggest all the claim limitations” (see MPEP 2143). Because the prior art references employed in the outstanding Office Action do not teach or suggest all the claim limitations (of the invention) as is required, the Applicant respectfully submits that the burden of establishing a prima facie case for obviousness has not been met. Accordingly, the Applicant respectfully request the withdrawal of the 35 U.S.C. 103(a) rejection made in the outstanding Office Action.

Therefore, Applicant respectfully submits that Feng et al. in view of Moughanni et al. does not anticipate or render obvious the embodiments of the present claimed invention as are recited in Claims 1, 9, and 14 and, as such, Claims 1, 9, and 14 overcome the basis for rejection under 35 U.S.C. § 103(a). Accordingly, Applicant respectfully submits that Claims 1, 9, and 14 are in condition for allowance. In addition, Applicant respectfully submits that Feng et al. does not anticipate or render obvious the present invention as is recited in Claims 5-7 which depend from independent Claim 1, Claims 10, 12 and 13 which depend from independent Claim 9, and Claim 16 which depends from independent Claim 14 that Claims 5-7, 10, 12, 13 and 16 are also in condition for allowance as being dependent on an allowable base claim.

Conclusion

In light of the above-listed remarks, the Applicant respectfully requests allowance of the remaining Claims.

The Examiner is urged to contact the Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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